

REMARKS

Summary of the Office Action

Claims 1-5, 7, 9-14, 30-34, 36, 38-43, and 47-50 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Kaneko et al.* (USPN 5,202,605) in view of EP 0863533 (EP '533).

Summary of the Response to the Office Action

Applicants have amended claims 47-50. Applicants respectfully submit that these amendments do not relate to the independent claims, and therefore, the amendments do not raise new issues requiring further search and/or consideration. Claims 1-50 are presently pending, and claims 1-5, 7, 9-14, 30-34, 36, 38-43, and 47-50 are presently under consideration.

The Rejection under 35 U.S.C. 103(a)

Claims 1-5, 7, 9-14, 30-34, 36, 38-43, and 47-50 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Kaneko et al.* (USPN 5,202,605) in view of EP 0863533 (EP '533).

Applicants respectfully traverse the rejections for at least the following reasons.

With respect to independent claims 1 and 30, Applicants respectfully assert that the applied art, whether taken singly or combined, do not teach or suggest a combination including an insulation layer in which a film thickness is gradually reduced. The Office Action suggests that the insulating layer 54 in Figure 2 of *Kaneko et al.* is an "insulating layer" as claimed. Further, at pages 4-5, the Office Action asserts that "no objective standard is set forth for how gradual the taper must be in order to be deemed 'gradually reduced'." Thus, the Office Action alleges that "the recessed insulating layer [54] of *Kaneko* is as 'gradually reduced' as is required by the claims." Applicants respectfully disagree. One of ordinary skill in the art would readily

recognize that the insulating layer 54 of *Kaneko et al.* drops off sharply and is not gradually reduced. In fact, column 2, line 61, to column 3, line 2, and column 3, lines 39-49, of *Kaneko et al.* describe the insulating layer 54 as having “step variations” and “step changes” which would clearly not be “gradual” reductions. Contrastingly, in accordance with the claimed invention, the gradual reduction of the insulating layer film thickness is such that improved electron emission is achieved as discussed, for example, at page 33, lines 13-22, of the present application.

Applicants respectfully assert that the Office Action does not rely on *EP '533* to teach this feature. Moreover, Applicants respectfully assert that *EP '533* cannot remedy this feature.

Applicants respectfully assert that the rejections under 35 U.S.C. § 103(a) should be withdrawn because neither *Kaneko et al.* nor *EP '533*, whether taken singly or combined, teach or suggest each feature of independent claims 1 and 30, as amended. MPEP § 2143.03 instructs that “[t]o establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 409 F.2d 981, 180 USPQ 580 (CCPA 1974).” Furthermore, Applicants respectfully assert that dependent claims 2-5, 7, 9-14, 31-34, 36, and 38-43 are allowable at least because of their dependence from independent claims 1 and 30 and the reasons set forth above.

With further respect to dependent claims 47 and 49, Applicants respectfully asserts that the definition of “concave” cited by the Final Office Action refers to a specific geometry of a polygon and not a surface. It is respectfully noted that all other definitions provided with the Final Office Action suggest curved. Nonetheless, to improve form, Applicants have amended dependent claims 47 and 49 to recite a “curved concave” recess portion.

With further respect to dependent claims 48 and 50, Applicants have further recited that one of the carbon region and the metal thin film electrode is gradually reduced “to a thickness of zero” to better define this feature. Applicants respectfully assert that metal layer 55 of *Kaneko et al.* is not gradually reduced to a thickness of zero.”

Rejoinder

Applicants respectfully assert that withdrawn dependent claims 6, 8, 15-16, 35, 37, and 44-46 are allowable at least because of their dependence from independent claim 1 or 30 and the reasons set forth above. Thus, Applicants respectfully request rejoinder of dependent claims 6, 8, 15-16, 35, 37, and 44-46.

Conclusion

In view of the foregoing, Applicants respectfully request entry of the amendments to place the application in clear condition for allowance or, in the alternative, in better form for appeal. Should the Examiner feel that there are any issues outstanding after consideration of the response, the Examiner is invited to contact the Applicant’s undersigned representative to expedite prosecution.

Attached hereto is a marked-up version of the changes made by the current amendment. The attachment is captioned “Version with markings to show changes made.”

If there are any fees due in connection with the filing of this paper, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted

MORGAN, LEWIS & BOCKIUS LLP

By: 

Robert J. Goodell

Reg. No. 41,040

Dated: May 22, 2003

Customer Number 009629
MORGAN, LEWIS & BOCKIUS LLP
1111 Pennsylvania Avenue, N.W.
Washington, DC 20004
202-739-3000

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Please amend dependent claims 47-50 to read as follows:

47. (Amended) An electron-emitting device as claimed in claim 1, wherein said island region defines a curved concave recess portion.

48. (Amended) An electron-emitting device as claimed in claim 1, wherein at least one of said carbon region and said metal thin film ~~{electron}~~ electrode has a film thickness that is gradually reduced to a thickness of zero in the island region.

49. (Amended) A display as claimed in claim ~~[4]~~ 30, wherein said island region defines a curved concave recess portion.

50. (Amended) A display as claimed in claim ~~[4]~~ 30, wherein at least one of said carbon region and said metal thin film ~~{electron}~~ electrode has a film thickness that is gradually reduced to a thickness of zero in the island region.